

Claims

[c1] 1) A method of producing a bearing housing (31) from a worn housing (1) extending along an axis (5) and comprising a used intermediate portion (7); a first (16) and a second (17) used front portions aligned with said used intermediate portion (7); a first (12) and a second (14) used rear portions also aligned with said used intermediate portion (7); and a used shield (22) inside said used intermediate, front and rear portions (7, 16, 17, 12, 14), and the ends (24, 23) of which are integral with said used intermediate portion (7) and said first used front portion (16) respectively; characterized by comprising the steps of detaching said used shield (22) from said first used front portion (16) and from said used intermediate portion (7); detaching said used intermediate portion (7) from said first used rear portion (12) and from said second used front portion (17); and connecting a new shield (42) integrally to a new intermediate portion (35) and to said first used front portion (16).

[c2] 2) A method as claimed in Claim 1, characterized in that the step of detaching said used shield (22) from said used intermediate portion (7), and the step of detaching said used intermediate portion (7) from said second used front portion (17) are performed by means of a single cutting operation (32).

- [c3] 3) A method as claimed in Claim 1, characterized in that connecting said new shield (42) to said first used front portion (16) comprises the operations of connecting two projecting fastening appendixes (37, 38) integrally to the inside of said first and, respectively, second used front portions (16, 17); and welding said new shield (42) to said fastening appendixes (37, 38).
- [c4] 4) A method as claimed in Claim 3, characterized in that said fastening appendixes (37, 38) are connected by forming the fastening appendixes from weld material.
- [c5] 5) A method as claimed in Claim 3, characterized by comprising a stress relieving operation, and a shotblasting operation on the inner surface of said second used front portion (17) after said fastening appendixes (37, 38) are connected.
- [c6] 6) A method as claimed in Claim 3, characterized by comprising the further step of finishing at least part of the lateral surfaces (39, 40) of said fastening appendixes (37, 38) prior to welding said new shield (42).
- [c7] 7) A method as claimed in Claim 6, characterized by comprising a further stress relieving operation after said new shield (42) is welded to said fastening appendixes (37, 38).
- [c8] 8) A method as claimed in Claim 3, characterized by

comprising the further steps of sandblasting and cleaning the inner surface of said second used front portion (17) prior to connecting said fastening appendixes (37, 38).

[c9] 9) A method as claimed in Claim 1, characterized by comprising the further step of recovering said first used rear portion (12), and connecting said first used rear portion (12) and said new intermediate portion (35) integrally to each other.

[c10] 10) A method as claimed in Claim 9, characterized in that said first used rear portion (12) and said new intermediate portion (35) are connected to each other by aligning said first used rear portion (12) and said new intermediate portion (35) axially with each other.

[c11] 11) A method as claimed in Claim 10, characterized by finishing the end surfaces (43, 44), to be mated axially during alignment, of said new intermediate portion (35) and said first used rear portion (12).

[c12] 12) A fixture (51) for producing a bearing housing (31) from a worn housing (1) in accordance with the method claimed in Claim 10, characterized by comprising a base (52), which is fixed to an end portion (14) of said housing (31); radial forcing means (60) coaxial with said base (52); and actuating means (61, 65) for pushing said forcing means (60) radially against an intermediate portion (35) of said housing (31), so as to keep

said intermediate portion (35) aligned axially with said end portion (14) when connecting the intermediate portion (35) and the first used rear portion (12).

[c13] 13) A fixture as claimed in Claim 12, characterized by comprising a head (53) coaxial with said base (52) and said forcing means (60), and which is fixed to a further end portion (13) of said housing (31); said forcing means (60) being interposed axially between said base (52) and said head (53) to keep said end portions (13, 14) and said intermediate portion (35) axially aligned simultaneously.

[c14] 14) A fixture as claimed in Claim 12, characterized in that said actuating means (61, 65) comprise wedge means (61) movable axially and cooperating with said forcing means (60) to push the forcing means (60) radially.

[c15] 15) A fixture as claimed in Claim 12, characterized in that said forcing means (60) comprise a number of angularly spaced sectors (60); supporting means (54) and guide-and-slide means (63), interposed between said supporting means (54) and each of said sectors (60), being provided to guide said sectors (60) radially.